

WHAT IS CLAIMED IS:

1. A water-jet propulsion personal watercraft, comprising:
  - a body including a hull and a deck covering the deck from above;
  - a water jet pump configured to propel the watercraft and including a pump shaft extending in a longitudinal direction of the body;
  - a V-type four-cycle engine mounted within the body and configured to drive the water jet pump, the engine having a front-side cylinder inclined to extend upward and forward and a rear-side cylinder inclined to extend upward and rearward, wherein the engine includes:
    - a crankshaft;
    - an output shaft extending in a direction substantially perpendicular to the crankshaft and connected to the pump shaft, the output shaft being configured to output rotation transmitted from the crankshaft to outside the engine; and
    - a rotation transmission system configured to transmit the rotation of the crankshaft to the output shaft, wherein
  - the engine is mounted within the body in such a manner that the crankshaft extends in a width direction of the body.
2. The water-jet propulsion personal watercraft according to Claim 1, wherein the rotation transmission system has a drive gear mounted concentrically on the crankshaft and configured to rotate integrally with the crankshaft, and a rotation axis change system configured to transmit the rotation of the crankshaft to the output shaft in such a manner that a rotation axis of rotation of the drive gear is different from a rotation axis of rotation of the output shaft.

3. The water-jet propulsion personal watercraft according to Claim 2, wherein the rotation transmission system has an intermediate shaft provided in parallel with the crankshaft, an intermediate gear mounted concentrically on the intermediate shaft and configured to rotate integrally with the intermediate shaft in mesh with the drive gear, an output-side bevel gear mounted concentrically on the intermediate shaft and configured to rotate integrally with the intermediate shaft, and an input-side bevel gear mounted on the output shaft and configured to mesh with the output-side bevel gear.

4. The water-jet propulsion personal watercraft according to Claim 3, wherein the drive gear is formed on an outer peripheral portion of a crank web of the crankshaft.

5. The water-jet propulsion personal watercraft according to Claim 3, wherein the engine includes an oil pump having a pump shaft connected integrally with the intermediate shaft.

6. The water-jet propulsion personal watercraft according to Claim 2, wherein the rotation transmission system is configured to transmit the rotation of the crankshaft to the output shaft in such a manner that a rotation speed of the output shaft is different from a rotation speed of the crankshaft.

7. The water-jet propulsion personal watercraft according to Claim 1, wherein the output shaft is provided such that its axial direction corresponds with the longitudinal direction of the body, and is rotatably supported by a rear wall of a crank chamber formed within a crankcase of the engine.

8. The water-jet propulsion personal watercraft according to Claim 7, wherein the crankshaft is supported by bearings mounted on right and left side walls of the crank chamber of the crankcase, and a bearing mounted on a center wall provided within the crank chamber, and the output shaft is supported in the vicinity of a connecting portion between the center wall and the rear wall.

9. The water-jet propulsion personal watercraft according to Claim 1, wherein the rear-side cylinder of the engine is placed such that an inclination angle of the rear-side cylinder with respect to a vertical plane including a center axis of the crankshaft is smaller than an inclination angle of the front-side cylinder with respect to the vertical plane, and the rotation transmission system is disposed behind the crankshaft and under the rear-side cylinder.

10. The water-jet propulsion personal watercraft according to Claim 1, wherein the engine has a camshaft drive gear mounted on one end portion of the crankshaft to drive a camshaft driven gear mounted on one end of a camshaft located above each of the cylinders and a generator mounted on an opposite end portion of the crankshaft.

11. The water-jet propulsion personal watercraft according to Claim 10, wherein the engine has a relay gear provided between the camshaft drive gear and the camshaft driven gear, and the relay gear has a first relay gear, and a second relay gear located closer to a center of the engine than the first relay gear in a longitudinal direction of the crankshaft and configured to rotate integrally with the first relay gear, wherein the first relay gear meshes with the camshaft drive gear and the second relay gear is connected to the shaft driven gear through a chain or a belt.

12. The water-jet propulsion personal watercraft according to Claim 1, further comprising: an exhaust system passage extending from a cylinder head of the engine, and an air cleaner box provided in an air-intake system of the engine, wherein the exhaust system passage is provided on one end side of the crankshaft and the air cleaner box is provided on an opposite side of the crankshaft.

13. The water-jet propulsion personal watercraft according to Claim 12, wherein the engine has an air-intake chamber provided in a bank space between the front-side cylinder and the rear-side cylinder such that the air-intake chamber is located downstream of the air cleaner box in flow of taken-in air and connected to air-intake ports of the engine through air-intake pipes.

14. The water-jet propulsion personal watercraft according to Claim 13, wherein the air-intake pipes are respectively provided with injectors extending substantially vertically downward.

15. The water-jet propulsion personal watercraft according to Claim 1, wherein the body has a deck opening elongate in the longitudinal direction of the body is provided on an upper portion of the body, and a portion located above each of the cylinders of the engine is located within the deck opening as seen in a plan view.